

LETTERS

J. Raptor Res. 39(4):476–477

© 2005 The Raptor Research Foundation, Inc.

A PREVIOUSLY UNDESCRIBED VOCALIZATION OF THE NORTHERN PYGMY-OWL

Vocalizations of the Northern Pygmy-Owl (*Glaucidium gnoma*) were summarized by Holt and Peterson (2000, *The Birds of North America*, No. 494, Philadelphia, PA U.S.A.). The known repertoire of adult vocalizations consists of: the “toot song,” which functions as the primary song for both sexes; the “trill call,” which often accompanies the “toot song” and for which a function is not yet known; and the “chitter call,” which accompanies prey deliveries and certain interactions between breeding adults. Also, a “chatter call” used during copulation was described by Righter (1995, *Colo. Field Ornithol. J.* 29:21–23). Here, I describe a previously undocumented vocalization of the Northern Pygmy-Owl.

As part of an ongoing study of Northern Pygmy-Owls in northern Montana, I have radio-tracked 11 (between one and five annually) owls since 2001. Owls were tracked before, during, and after the nesting season. Periods of behavioral observation were intermittently conducted in durations ranging from ca. 15 min to 4 hr. On three occasions, I observed a “*weet*” vocalization, which somewhat resembled a single note of the “toot song,” but was slightly prolonged with a “screeching” quality and a slight upward bend in pitch. In abruptness and duration, this call superficially resembled the sudden, high-pitched alarm calls of some *Spermophilus* ground squirrels, but was deeper in pitch and slightly more hollow sounding. The most similar avian call that I am familiar with is the *ksew* call of the Northern Saw-whet Owl (*Aegolius acadicus*; Cunnings 1993, *The Birds of North America*, No. 42, Washington DC, U.S.A.). However, that call is lower in pitch, descending, and usually repeated in a brief series, while the *weet* call I describe here was a single ascending note. Proudfoot and Johnson (2000:7, *The Birds of North America*, No. 498, Philadelphia, PA U.S.A.) describe an alarm call of the congeneric Ferruginous Pygmy-Owl (*Glaucidium brasilianum*) as “short and sharp with upward inflection, *pee weet*, repeated at irregular intervals.” Although I am unfamiliar with the Ferruginous Pygmy-Owl alarm call, this describes accurately the Northern Pygmy-Owl vocalization I observed, except that the former consists of two syllables and the latter only one.

On 21 July 2003, while observing a Northern Pygmy-Owl family group, I first observed an adult male give the “*weet*” call. A few seconds later an adult Northern Goshawk (*Accipiter gentilis*) flew within 50 m of the family group and disappeared. On 1 July 2004 at 0936 H, while observing a family group with recently fledged young, I observed both the adult male and adult female give the *weet* call. A Northern Goshawk appeared and perched briefly in the same stand as the family group a few seconds after the calls. In that instance, the male gave the call first and was followed by the female. The female then repeated the call one more time just before the goshawk entered the stand. The female’s call was slightly higher pitched to a degree approximately equivalent to the difference in pitch of the “toot song” between the sexes (Holt and Peterson 2000, pers. obs.). At 1003 H, during the same observation period on 1 July 2004, a Northern Goshawk flew through an opening adjacent to the stand in which the family group (same stand and same family group as the previous observation) was located. Both adults gave *weet* calls, and both repeated the calls after 5–10 sec. In that instance, several of the seven fledglings had been calling actively before the adults gave the *weet* calls. The fledglings’ calls immediately ceased after the *weet* calls were given, but resumed less than 30 sec later, at which time the goshawk was no longer visible to me. I am not certain whether any of the Northern Goshawks in these instances were aware of the owls. Twice the goshawks simply flew past, and the one time a goshawk perched nearby, it quickly left the perch when it apparently became aware of my presence. The contexts of these observations suggest that the function of the *weet* call is an alarm call. During a Northern Pygmy-Owl study in Washington, A. Giese (unpubl. data) observed what was likely the call described here, and likewise suspected its function as an alarm call. The call was given several times during a 1.5 hr period by an adult female in the presence of fledged young. The young generally ceased vocalizing after the call was given. Unlike the calls I observed, however, that female vocalized in bouts of 3–4 calls at a time.

Interestingly, I have observed instances in which Northern Pygmy-Owls might have been expected to give alarm calls, but did not give the *weet* call. I observed a domestic dog in close proximity (<5 m) to a group of fledgling and adult owls perched low on branches on two occasions in 2004 and heard no calls. When banding young owls or climbing nest trees to check nests, I have observed adults give short versions of the toot song, trill calls, and display agitated behavior (e.g., rapid tail twitching, perching close to and staring at the human intruder). However, I have not heard the *weet* call I describe here in those situations. On 7 May 2001, I observed a Northern Goshawk pass

within 5 m of a solitary nonbreeding Northern Pygmy-Owl perched with prey. The owl watched the goshawk intently, but gave no call.

If the *weet* call was indeed an alarm call, these observations suggested that it may be associated specifically with avian predators, as the mammalian (dog and human) observations I described did not elicit the call. Additionally, the observation of the solitary owl failing to give a *weet* call suggests that it may be used only when fledglings or mated owls are present. Alarm calls are well documented for many strigids (e.g., Ferruginous Pygmy-Owl, Proudfoot and Johnson 2000; Great Gray Owl, *Strix nebulosa*, Bull and Duncan 1993, *The Birds of North America*, No. 41, Philadelphia, PA U.S.A.; Long-eared Owl *Asio otus*, Marks et al. 1994, *The Birds of North America*, No. 133, Philadelphia, PA U.S.A.) and are often given in response to threats to nests and fledged young. However, further study is needed to better understand the causes and contexts of this and other Northern Pygmy-Owl vocalizations.

I am grateful to the many individuals who have volunteered their time to conduct fieldwork during this study. Private contributions have helped make this ongoing study possible. The Conservation Research Foundation, Marmot's Edge Conservation, the Owl Research Institute, and the Rocky Mountain Ranger District of the Lewis and Clark National Forest have generously provided assistance with various parts of this project as well. A. Giese and G. Proudfoot provided criticism and field observations that improved the manuscript.—**Graham G. Frye (e-mail address: ggfrye@rmf-inh.org) Rocky Mountain Front Institute of Natural History, P.O. Box 186, Choteau, MT 59422 U.S.A.**

Received 12 August 2004; accepted 18 June 2005

Associate Editor: Ian G. Warkentin